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ABSTRACT

One of the issues surrounding the successful integration of technology into teaching practices is teachers' lack of time to develop or modify lesson plans, units, or curricula to incorporate technology. The Education Forum Web site, http://education.concordia.ca/~heidi_schnackenberg/educationfo rum, developed as a project for a graduate course on educational computing at Concordia University (Quebec), was created to solve this problem by: (1) saving teachers the time and frustration it takes to do a general search for technology lesson plans; (2) saving teachers time by evaluating the lessons and only including instructionally sound lesson plans; and (3) saving teachers time by pre-categorizing technology lesson plans according to subject matter area, in order to facilitate the choosing of technology-based lesson plans. The overall organization of the site includes links to many teacher information resources, search engines, and technology-based lesson plans. The lesson plan page constitutes a major focus of the site and is divided into Language Arts, Social Studies, Mathematics, Science, Art, Music, and Foreign Language, specifically targeted for K-12 teachers. The Education Forum was included as a resource in an inservice teacher workshop on basic principles of effective incorporation of technology into teaching practices. Examples of Educational Forum pages are appended. (DLS)

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The Education Forum: A Web-Based Resource For Teachers

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1999 AECT National Convention

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The challenge for many teachers who want or need to integrate technology into their everyday lesson planning is creating the right formula that combines actual student use of technology (graphing calculator, CD-ROM, etc.), with a meaningful educational experience that has at its core, set objectives and a means of assessment. One place that teachers look to for these types of lesson plans is the growing number of books and magazines that specialize in this subject. However, another more dynamic and powerful tool is the Internet, with its endless number of online resources from e-mail discussion lists on which technology integration is the main theme (for example, WWWEDU and Classroom Connect), to web sites that contain lesson ideas themselves. The question then becomes, who has the time to sort through the vast maze of resources?

One of the issues surrounding the successful integration of technology into teaching practices is teachers lack of time to develop or even modify lesson plans, units, or curricula to incorporate technology. Numerous research studies have addressed the issue of teachers needing time in order to successfully implement technology lesson. Willis (1993) states that teachers having time to experiment, explore, and study technology innovations is essential, but rare in schools. Brennan (1991) lists one of the causes of the stationary or declining effectiveness of the integration of technology in schools as the limited time allotted teachers to do so. Fulton (1988) argues that the most crucial factors that underlie whether or not teachers utilize technology are time and support. Finally, Schrum (1995) reports that every student in a telecommunications seminar for inservice educators identified lack of sufficient time as the major obstacle that kept them from learning about or becoming proficient with information technologies.

The creation of the Education Forum website (http://education.concordia.ca/~heidi_schnackenberg/educationforum) was an attempt to solve the aforementioned problem on three levels 1) to save teachers the time and frustration it takes to do a general search for technology lesson plans, 2) to save time for teachers by evaluating the lessons and only including instructionally sound lesson plans in the site, and 3) to save teachers time by pre-categorizing technology lesson plans according to subject matter area in order to facilitate the choosing of technology-based lesson plans. In essence, the web site tries to eliminate the chore of hours of searching the Internet by placing at the teacher's disposal an organized web site containing many of resources that teachers could use on a daily basis.

The overall organization of the website includes links to many teacher information resources, search engines, and technology-based lesson plans. The lesson plan page constitutes a major focus of the site and is divided into: Language Arts, Social Studies, Mathematics, Science, Art, Music, and Foreign Language, and is specifically targeted for K-12 teachers. See Appendix A for examples of the various pages.

The site was developed as a project for a graduate course on Educational Computing at Concordia University in Montreal, Quebec. The initial concept was originated by the course professor who had previously taught K-12 and had first-had knowledge of the efforts of schools to integrate technology into pedagogical practices and the difficulties teachers encountered in trying to do this. The idea of the site came to

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fruition under the labors of two graduate students in the course. One of the students acted as the researcher, investigating various online lesson plans and evaluating them for inclusion in the site. The only criteria for incorporation into the site was that the technology was not an "extra" component of the lesson, but rather an integrated part that the success of the lesson depended upon. While the lessons were being compiled, another graduate student programmed the site and developed the navigation scheme. The site was then transferred to the professor's webspace at the university for ease of maintenance.

The Education Forum website was included as a resource in an inservice teacher workshop in the spring of 1998. During the training, educators learned basic principles of effective incorporation of technology into actual teaching practices. While the site was not included as an integral part of the in-service, several teachers did explore the site and said that it was a useful resource for them and that they planned on utilizing some of the lessons that they had previewed. The site is also on record with Concordia University as a resource to be given to teachers and preservice teachers as they begin to attempt incorporating technology-based lesson plans into their teaching practices.

Future research ideas involving the site are currently under consideration. One way that the developer's would like to see the site used for research purposes is to incorporate it as an essential part of a teacher in-service training. Evaluating teacher attitudes and motivation regarding developing technology-based lesson vs. simply retrieving them from a quality website would be worth investigating. Would teachers be less resistant to incorporating technology into pedagogy if they did not have to spend a lot of time creating many new lesson plans? The developers of the Education Forum think this is a question worth pursuing.

Since the site is ever in-progress as new links can always be added and updated, the developers hope that educators and interested parties will make recommendations of lessons they know of or have developed for inclusion into the Education Forum. It is also the developer's hope that participants attending the current presentation will walk away interested not only in the site itself, but also with the idea that the Internet can in fact become an important partner for educators.

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Fulton, K. (1988). Preservice and inservice: What must be done in both. Electronic Learning, 8(2), 32-36.

Schrum, L. (1995). Educators and the Internet: A case study of professional development. Computers in Education, 24(3), 221-228.

Willis, J. (1993). What conditions encourage technology use? It depends on the context. Computers in the Schools, 9(4), 13-32.

APPENDIX A

Education Forum

Welcome to the **Education Forum** website! This site is intended to help teachers in grades K through 12 incorporate technology into their classroom practices. Several types of information are contained in the site in order to assist teachers in creating lesson plans utilizing technology and the computer. Within the site, the first page is devoted to resources that will help teachers in exploring subject matter. The second page links to several different types of search engines in order to help teachers quickly find the specific information that they are looking for. The third page (and the true heart of this site) lists lesson plans for many subjects and grade levels that incorporate technology into the design of the lesson. It is our hope that this site will successfully assist teachers in their attempt to incorporate technology into education. Your feedback is welcome so please email us! And of course, if you have a lesson plan that you would like to include in the site, let us know.

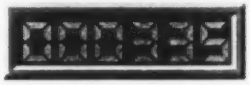
The first section is teacher resources , which essentially leads you to vast amounts of on-line encyclopedic information in the various subject areas.

The second, search engines , is a means for teachers to find precise information to supplement classroom teaching simply by typing in a key word, phrase or question.

The third section provides a wide variety of technology-based lesson plans and will link you to a sampling of lesson plans in the areas

of Language Arts, Social Studies, Math, Science, Foreign Language Studies, Art, and Music. The Lesson Plan page is designed to assist teachers in course preparation using a variety of technologies.

For information about the creators of this page, please visit our Bio page.
This web page was created and researched as part of **Introduction to Educational Computing**, a course in the graduate program of Educational Technology at Concordia University in Montreal, Quebec, Canada.



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Lesson Plans

Welcome to the Lesson Plan page. By clicking on the various highlighted subject areas, you will be able to access a variety of technology-based lesson plans. We hope you find these links useful to your teaching.

Art lesson plans
Foreign Languages lesson plans
Language Arts lesson plans
Math lesson plans
Music lesson plans
Science lesson plans
Social Studies lesson plans

N.B. The degree to which technology is used will vary from lesson to lesson.

Back to Main Page

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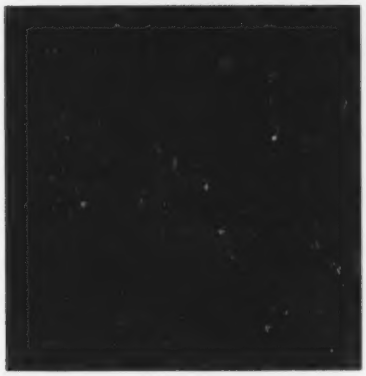
The Science Page



Welcome to the Science Page. Here you will find links to a variety of technology-based lesson plans.

Weather Watchers for grades k-2

This is one in a series of Web Quest Projects developed to teach kids the basics about the Weather using an interdisciplinary approach that integrates language arts, math, and social studies components.

The Kids Food Cyberclub

Teachers covering health and nutrition subjects will find fun and interesting lessons for elementary school-aged kids.

Internet Plasma Physics Education Experience

H.S. Physics teachers will find exciting lesson plans on electricity, magnetism, and fusion that feature fully interactive modules and the latest in web-based technology.

Around The Solar System

From the Space Telescope Science Institute, students in grades 3-6 will learn about and obtain skills related to identifying the major objects in the solar system via this online lesson.

The Hubble Deep Field Academy

From the Space Telescope Science Institute, this online lesson provides students in grades 6-8 an online environment that fosters the use of scientific data to learn about the universe and galaxies.

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The Guest Investigator Puzzle
This activity will have students in grades 6-9 become familiar with the work of astronomers and what they study, stars.

Online Weather Curriculum and Activities
Covis provides Science teachers with complete online lesson plans on the Weather, which will have students taking advantage of the power and information of the web, while engaging in interactive experiential learning.

NJNI Lesson Plans
Here, K-12 science teachers will find modules on a variety of subjects, some single lesson, others with multiple lessons, that have students collecting real-time data and completing other online activities to enhance their learning.

The Real Scoop on Tobacco - grades 5-9.
This is one in a series of Web Quest Projects focusing on health science, developed to teach students about the dangers of the use of tobacco through an interdisciplinary approach that integrates language arts as well as visual and performing arts into the learning.

International Symposium on Environmental Issues grades 8-9.
This is one in a series of Web Quest Projects developed to help students understand contemporary environmental issues impacting our planet using an interdisciplinary approach that integrates Language Arts, Social Studies, Health and Mathematics into the learning.

Health Trainer grades 9-12.
This is one in a series of Web Quest Projects developed to help students gain a better understanding of the importance of maintaining good health through nutrition and fitness using an interdisciplinary approach that integrates language arts.

Biodesigns incorporated - grades 10-12.
This is one in a series of Web Quest Projects developed to help students apply genetic engineering concepts using an interdisciplinary approach that integrates Language Arts, Science and Mathematics.

Zelda's Zany Zoo - grades 3-6.
This is one in a series of Web Quest Projects developed to help students gain an understanding of the various issues of animals in zoo and natural habitats using an interdisciplinary approach that integrates Language Arts, Social Studies, and Visual and Performing Arts.

The Techno Rainforest
From the RETANET lesson plan page, this high school Ecology lesson on the rainforest is divided into a set of mini-lessons that have students learn & apply skills from research to presentation using the internet, various multimedia, and Clarisworks database.

Science Lessons
Science teachers from K-12 are invited to search these pages containing individual lesson plans that integrate teaching different science concepts with the use of various technologies: from the web, to computer applications, to science software.

Volcano!
From "Link 2 Learn," this primary level lesson has kids go online to learn close up about volcanos.

Shuttle Online
From "Link 2 Learn," this intermediate level lesson has students explore life on the Space Shuttle to learn about micro gravity. They may have a chance to communicate with astronauts via email.

That's Electric
From "Link 2 Learn," students studying electricity and lightning will take a virtual museum tour, then conduct an in-class experiment.

Technology In Action
From "Link 2 Learn," this intermediate lesson demonstrates to students that with technology, dissections can be done without using real animals, by participating in an online virtual dissection.

An Invisible World
From "Link 2 Learn," middle school students go online to view images that can not be seen with the naked eye, and learn about the scientific

instruments that make this possible.

Voyage To The Isles of Cells
From "Link 2 Learn," high school students learn about the structures of cells by visiting them online.

Spotting The Quake
From "Link 2 Learn," high school students learn about the science of detecting earthquakes via online simulations and other in class activities.

Eye In The Sky
From "Link 2 Learn," this high school lesson introduces geostationary operational environmental satellites online, linking this to the study of weather.

The Whole Frog Project
This grade 9-11 high school lesson permits students to study and explore the biology/anatomy of a frog using computer-based 3D imaging.

Back to Lesson Plans Page

Back to Main Page

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